AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-8: Canceled.

9. (Previously Amended) A process for producing difluoromethane comprising the steps of:

(A) preheating a composition comprising hydrogen fluoride and dichloromethane to form a vaporized and superheated composition;

(B) reacting the preheated composition of step (A) in the presence of a fluorination catalyst under conditions suitable to form a product stream comprising difluoromethane, chlorofluoromethane, hydrogen chloride, dichloromethane and hydrogen fluoride;

(C) recovering by distillation from the product stream of step (B) a high boiling fraction comprising hydrogen fluoride, dichloromethane, and chlorofluoromethane and a low boiling fraction comprising difluoromethane, hydrogen chloride, hydrogen fluoride, and reaction byproducts; and

(D) recovering substantially pure difluoromethane from the low boiling fraction of step (C),

wherein the hydrogen fluoride and the chlorofluoromethane are present in the product stream in a mole ratio of from about 25:1 to about 75:1.

10. Canceled.

11. (Original) The process of claim 9 wherein the composition of step (A) further comprises chlorofluoromethane.

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Claims 12-16: Canceled.

17. (Original) The process of claim 9 wherein the high boiling fraction of step (C) is recycled to step (A).

18. (Previously Amended) The process of claim 9 wherein step (D) further comprises the substeps of:

(E) treating the low boiling mixture of step (C) in an hydrogen chloride distillation column or an aqueous hydrogen chloride absorption tower under conditions suitable to remove hydrogen chloride and trace hydrogen fluoride to form a crude difluoromethane product;

(F) treating the crude difluoromethane product formed in step (E) with a first caustic scrubber under conditions suitable to form a neutralized product;

(G) treating the neutralized product of step (F) in a second caustic scrubber under conditions suitable to form a substantially chlorine-free product;

(H) treating the substantially chlorine-free product of step (G) with a sulfuric acid scrubber and subsequently with a solid desiccant to form a substantially moisture-free product; and

(I) distilling the substantially moisture-free product of step (H) under conditions suitable to produce substantially pure difluoromethane.

Claims 19-20: Canceled.

21. (Previously Presented) The process of claim 9 wherein the fluorination catalyst is a pretreated fluorination catalyst.

22. (Previously Presented) The process of claim 9 wherein the fluorination catalyst is chromium oxide.

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